PROGRESS

OF

MEDICAL SCIENCE.

MEDICINE.

UNDER THE CHARGE OF

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Metabolism in Albuminuria.—EMERSON (*The Johns Hopkins Hospital Reports*, vol. x. p. 323) has made a very careful study of the disturbances of metabolism in a preliminary series of ten cases of nephritis in the medical wards of the Johns Hopkins Hospital. The work was undertaken with the view of determining, if possible, some of the influences governing the amount of albumin in the urine of these cases. The albumin and nitrogen excretion in the urine were specially studied. The former was estimated gravimetrically, and the latter by the Kjeldahl method. Some of the cases are illustrated by charts, indicating the curves representing the total urine, albumin, nitrogen, and temperature lines. His conclusions, with some additional details, are as follows:

1. The percentage of albumin is the best index for the course of a case of albuminuria.

2. In many cases of chronic nephritis there is an acute process in progress, and it is this latter which governs the course of the disease. Variations in the course of this acute process are shown by (*a*) increase in albumin per cent.; (*b*) slight rises in temperature.

3. The effect of various diets, therapeutic measures, muscular work, etc., on the albuminuria is often produced by their effect on this acute process.

4. In governing the diet in nephritis, slight rises in temperature should be taken as evidence that the diet is unsuited to the case.

5. While the acute process is active, milk is the best diet; not too much, and properly diluted. After the acute process has subsided, the patient may even benefit from additions of bread and butter, rice, fruit, or even, later, of meat.

6. If the day and night urines be studied separately, it was found that (*a*) the line of water excretion for the day is practically parallel to that of the

night; but the changes in the night preceding gives the curves the appearance of being the reverse of each other; (*b*) the albumin per cent. of day urine is practically always above that of the night; (*c*) in the night urine the albumin and nitrogen lines are practically parallel, showing some definite relation between the excretion of these, and the percentage of each varies inversely as the amount of urine to a certain degree.

Under normal conditions the kidneys, as well as the other organs, rest somewhat during the night. Quincke, Iljisch, and Laspeyres drew attention to some interesting changes occurring in disease. Iljisch found that in liver, kidney, and heart diseases which produce œdema, the urine voided per hour during the night contains more solids and is greater in amount than that during the day. In renal diseases, even though no œdema be present, the above is true. Laspeyres studied this point in a good many heart, renal, and other diseases. It was confirmed in certain cases of nephritis. He found it true in certain cases with cardiac or arterial [disease, and in acute nephritis or chronic parenchymatous nephritis without heart lesion, the normal ratio obtained. He considers, therefore, that this abnormal ratio depends on the organic circulatory disease, and not on the renal condition alone. His explanation is essentially that of Quincke's, that during the night the kidneys have a chance to excrete the fluid of which during the day the tissues could not rid themselves owing to the circulatory disturbances.

On the Micrococcus of Acute Rheumatism.—E. W. AINLEY WALKER (*The Practitioner*, February, 1903, p. 185) advances bacteriological evidence which, with that of other investigators previously published, tends to strongly support the view that there is a specific organism that causes rheumatic fever.

Of the various organisms that have been isolated in cases of rheumatic fever, staphylococci and streptococci were the ones that were most frequently isolated by the earliest investigators. Achalme isolated a bacillus which gave positive results in experiments on animals. Recently much attention has been directed to an organism which was described by Apert and Triboulet in 1898, but which is, possibly, identical with that isolated by Popoff in 1887. Poynton and Paine have, up to the present time, obtained this diplococcus, as they prefer to consider it, from eighteen cases of acute rheumatism, and have by its inoculation into animals produced polyarthritis, pericarditis, myocarditis, endocarditis, pleurisy, nodule-formation, fungating endocarditis with visceral infarctions, and probably chorea. Fritz Meyer has supported their results in Germany. Poynton and Paine regarded this organism as the specific cause of acute rheumatism, and called it the diplococcus rheumaticus.

Walker and Beaton took up the bacteriological investigation of rheumatic fever, and they have come to the conclusion previously expressed by Poynton and Payne, that a particular micro-organism, and no other, is constantly associated with acute rheumatic lesions. They have isolated this micro-organism in fifteen rheumatic patients. These comprised eight cases of acute rheumatism, three cases of chorea in children, and four of malignant endocarditis in rheumatic subjects. By inoculation of the organism into rabbits they have produced the following effects: acute septicæmia, pericarditis, endocarditis with beady vegetations, pleurisy, and monarthritis or polyarthritis. The